

CLICK BOND®

*Bonded Fastener Technology for Enhanced Structural
Design, Repair and Streamlined Manufacturing*



NAVAL / MARINE & OFFSHORE

PIONEERING > ADVANCED > SOLUTIONS

clickbond.com

Streamlining The Design and Production of Modern Marine Systems

Attachment Applications for Marine Environments



CB3200
2.00" Base Stud



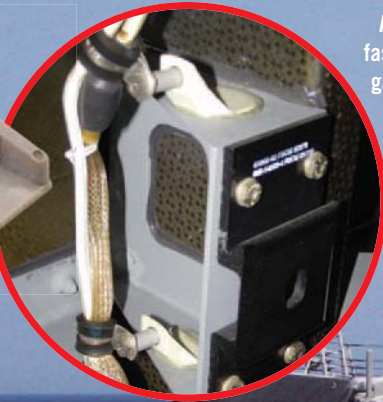
Adhesive bonded fastening eliminates galvanic corrosion potential



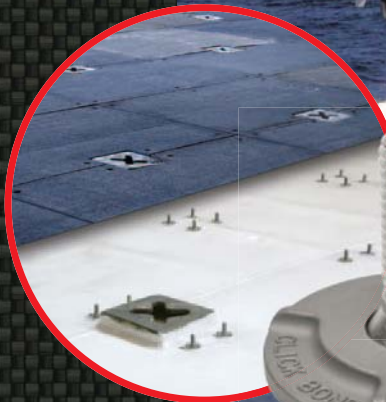
CB9522
Floating Deck Stud



CB4022
Right Angle Nutplate



Adhesive bonded fastening eliminates galvanic corrosion potential



CB9522
Floating Deck Stud

No welding, no fire watch and no gas freeing of tanks reduces drydock costs

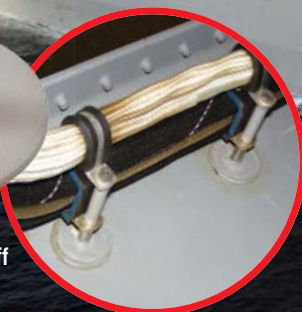
Simplified mounting to composites without difficult drilling and potting



CS125
1.25" Base Stud



CN200
2.00" Base Standoff




Fuel and fluid resistant materials allow installation in harsh environments











MOUNTS

Image	Part No. & Description	Performance Guidelines
	CB3019 Cable Tie Mount Swivel 	Exceeds MS3367 50lb (23kg) requirement
	CB4021 Standoff Cable Tie Mount	55lb (25kg) Lateral Shear 60lb (27kg) Lateral/Right Angle 85lb (40kg) Tension
	CB4022 Right Angle Nutplate	100lb (45kg) Right Angle Shear 250lb (115kg) Tension
	CB4023 Standoff Nutplate	70lb (30kg) Shear - 1.0" (25mm) offset 300lb (135kg) Tension
	CS120 Insulation Blanket Mount Pin 	Contact Click Bond for specific application performance
	CB9120 Cable Tie Mount 	Exceeds MS3367 50lb (23kg) requirement
	CB9151 Transverse Cable Tie Mount	Exceeds MS3367 50lb (23kg) requirement
	CB9173 - CB9174 Insulation Blanket Mount	35lb (15kg) Shear - .75" (19mm) offset 45lb (20kg) Tension
	CB9205 Loop Strap Fastener 	600lb (270kg) Shear 600lb (270kg) Tension
	CB9302 Miniature Cable Tie Mount	Exceeds MS3367 50lb (23kg) requirement
	CB9788 Flush Ring Tie 2.63" (66.8mm) Dia. Base	Contact Click Bond for specific application performance
	CB9789 Fixed Ring Tie 2.00" (50.8mm) Dia. Base	Contact Click Bond for specific application performance
	CB9709 Cable Cushion Clamp 2.00" (50.8mm) Dia. Base	Contact Click Bond for specific application performance




BUSHINGS

Image	Part No. & Description	Performance Guidelines
	CN505 0.62" Dia., Threaded	Contact Click Bond for specific application performance
	CN555 1.25" Dia., Threaded	
	CN305 / CB3005 1.50" Dia., Threaded	

STUDS

Image	Part No. & Description	Performance Guidelines
	CS62 0.62" (15.9mm) Dia. Base	400lb (180kg) Shear 250lb (115kg) Tension
	CS125 1.25" (31.8mm) Dia.  Base	2000lb (900kg) Shear 1000lb (450kg) Tension
	CB3200 / CS200 2.00" (50.8mm) Dia.  Base	4000lb (1800kg) Shear 1700lb (770kg) Tension
	CB9522 Large Dia., Floating 	9000lb (4000kg) Shear 6000lb (2700kg) Tension
	CB9567 Electrical Grounding Spacer Stud, 1.25" (31.8mm) Dia. Base	Contact Click Bond for specific application performance

NUTPLATES

Image	Part No. & Description	Performance Guidelines
	CN609 Open Style - Two Lug	Nutplates meet NASM25027 and ISO5858 strength requirements
	CN623 Two Lug - Extended Float	
	CN611 Open Style - One Lug	
	CN610 Sealed - Two Lug	
	CN614 Open Style - Non Replaceable Nut	

STANDOFFS

Image	Part No. & Description	Performance Guidelines
	CN62 0.62" (15.9mm) Dia. Base	Contact Click Bond for specific application performance
	CN125 1.25" (31.8mm) Dia.  Base	Contact Click Bond for specific application performance
	CN200 2.00" (50.8mm) Dia.  Base	Contact Click Bond for specific application performance
	CB4002 1.25" Dia. Composite Base	120lb (35kg) Shear - 1.0" (25mm) offset 400lb (180kg) Tension

Adhesives and Dispensers

Structural adhesives with convenience

Click Bond packages a selection of leading structural adhesives in convenient dual-component cartridges dispensed with hand tools through disposable static mixing tips. This format simplifies adhesive preparation while eliminating component ratio errors associated with hand mixing.

Suitable adhesives for bonding to nearly any substrate material as well as those tailored to high temperature or fuel immersion applications are available.

Click Bond's application engineers can assist with selection of the optimal adhesive product to meet your bonded fastener requirements. Extensive test data demonstrating bond strength to a wide variety of substrates, with environmental conditioning, is available from Click Bond's technical library.

Cost effective solutions

- Resealable cartridge reduces adhesive waste
- Static mixing tips ensure consistent and thorough component blending
- Dispensing tools and slides for various component ratios
- Industry standard acrylic, epoxy, and urethane adhesives from major manufacturers available
- Convenient 40-50ml cartridge format for production or 3.5gm packets for repair
- Click Bond fasteners available kitted with adhesives and surface preparation materials



CB9522 Stud Bonded to Metallic Substrate with CB200 Acrylic Adhesive





American Bureau of Shipping Certification

Click Bond holds a Certificate of Manufacturing Assessment from ABS (American Bureau of Shipping). Please contact Click Bond regarding ABS type approval of specific bonded fastener and adhesive products.

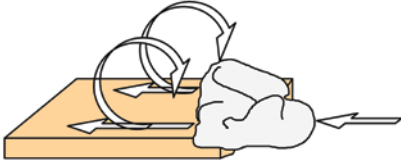
CN125 Large Base Standoff CB3019 Swivel Cable Mount CB9151 Transverse Cable Tie Mount CB9522 Large Base, Flotaing Stud
 CB3200 Large Base Stud CB9120 Cable Tie Mount CN200 Large Base Standoff CB9205 Loop Strap Mount CS200 Large Base Stud
 CS125 Stud CS120 Insulation Blanket Mount Pin CS922 Internally Fixtured Stud CB200 Adhesive CB420 Adhesive

Adhesives Quick Reference Chart

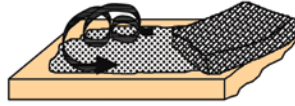
Adhesive	Mix Ratio (Vol.)	Cure Properties (at room temp. 72°F / 22°C)					Typical Strength		Service Temp		Shelf Life	
		Working Time	Handling Strength	75% Strength	90% Strength	Full Strength	Shear ASTM D1002	T Peel ASTM D1876	Min.	Max.	Room Temp. 72°F / 22°C	Refrigerated 32°F to 50°F 0°C to 10°C
CB200 	8:1	5 Min.	30 Min.	--	2 Hrs.	24 Hrs.	4400 psi (30.3 MPa)	21 pli (3.7 kN/m)	-67°F (-55°C)	250°F (121°C)	6 Months	1 Year
CB359	2:1	60 Min.	24 Hrs.	--	--	5-7 Days	4500 psi (31.0 MPa)	60 pli (10.5 kN/m)	-67°F (-55°C)	200°F (93°C)	6 Months	1 Year
CB420 	10:1	4-6 Min.	18 Min.	15-18 Min.	--	24 Hrs.	3050 psi (21.0 MPa)	28 pli (4.9 kN/m)	-40°F (-40°C)	250°F (121°C)	9 Months	9 Months

Click Bond's Unique Bonded Fastening System

Our proprietary disposable fixture eases part location and delivers consistent bondline control. Attention to surface preparation, as recommended in Click Bond process specifications, is critical to achieving optimal strength performance.

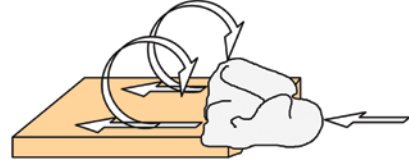


1. All surfaces to be bonded shall be initially clean and free of oil, dirt, and other foreign materials. Solvent wipe the substrate material to remove surface contaminants.

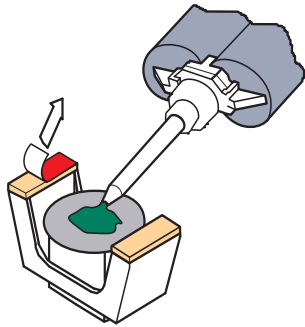


2. Remove the oxide surface layer and any treatments or coatings such as Alodine by abrading to reach bare metal. If primed, thin out, but do not remove the primer.

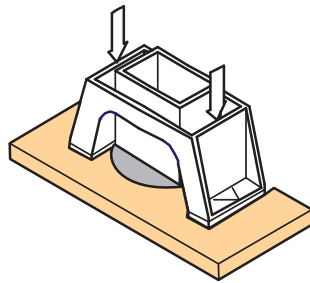
For laminates and composites, abrade with 100-180 grit aluminum oxide paper to remove surface gloss of matrix resin, but do not abrade into the fiberglass or carbon fiber reinforcement.



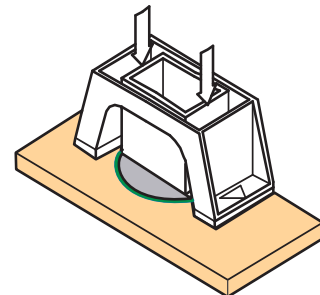
3. Solvent wipe area with clean paper or cheesecloth wipe, using single stroke motion while rolling wipe away from surface. Immediately after solvent wiping, dry wipe with a clean cloth.



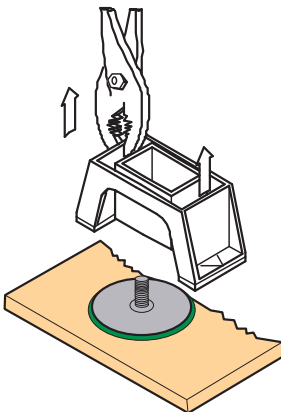
4. Remove and discard peel ply from foam tape pads on fixture. Apply adhesive to center of fastener baseplate.



5. Locate fixture on substrate using a template or by aligning index marks with drawn centerline. Press down on outer box to adhere foam tape to substrate.



6. Apply pressure to inner box to actuate fixture. Plastic springs extrude adhesive bondline and apply positive pressure during adhesive cure.



7. After adhesive has cured, grasp fixture with pliers, remove, and discard.

Benefits Of Click Bond Fasteners:

Simplify vessel systems installation and retrofit

- Installation labor reduced by up to 80%
- Challenging composites drilling eliminated
- Greater flexibility of systems routing

Eliminate welding

- Requires no fire watch, increases vessel and yard safety
- Improved work sequence flexibility
- No cumbersome welding equipment
- Simplifies rework, allows repair at sea

Extend vessel life

- Minimal hole count improves structural integrity
- Reduced environmental ingress and corrosion
- Thermal stress from hot work avoided

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